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tgtgttccta agaagacatt cagacccagg tcttatgcag gattacatcc gtttattatc 3240

aagggcaacc ttggtgaaag cagaaagggt gtgtgctatt gcatatatat gggggaaaag 3300

gcaatatatt tttcactgaa gctgagcaac cacatattgc tacaaggcaa atcaagaaga 3360

catcaggaaa tcagatgcac aggaaataaa ggaaagctgt gctttgtcat tgaatcctaa 3420

gttcttagct gctgatgcaa gttgtccccc aaggccatca caaagcagtg gggcatgagc 3480

tgtgtttcag gggccactaa ataacagctg gtactgaccc cagaaaccgc cttcatctcc 3540

attcggaagc aggtgacaca ccccttcaga aggtgccctg ggttgccgag tgtcagaata 3600

tactcaggac tccagaggtg tcacacgtgg aactgacagg agacccgcca ccgtggaggc 3660

agggggcaag aaactcaaga acgcatcaag agcaccagcc ctgggccagg gaagacaggc 3720

tcttcctgca gtttctcgtg gacactgctg gcttgcgggc agtcggtctc cagggtacct 3780

gttgtctctt ttccgatgta ataactactt tgaccttaca ctatatgttg ctagtagttt 3840

attgagcttt gtatatttgg acagtttcat atagggctta gagattttaa ggacatgata 3900

aatgaacttt tctgtcccat gtgaagtggt agtgcggtgc ctttccccca gatcatgctt 3960

taattctttc ttttctgtag aaaccaacag tttccattta tgtcaatgct aaatccaaag 4020

tcacttcaga gtttgttttc caccatgtgg gaatcagcat tcttaatttc gttaaagttt 4080

tgacttgtaa tgaaatgttc aagtattaca gcaatattca aagaaagaac cacagatgtg 4140

ttaaccattt aagcagatca tctgccaaac attatattac taataaaact taaccaacac 4200

ttacaattca gtcatcaaag taagtaaaaa ttagatgcta cagctagcta actgtatccc 4260

tagaaatgat gaataatttg ccatttggac agttaacatc caggtgttac aaagtcagtg 4320

ttaattctaa agatgatcat ttctgccctt tagaatggct tgtcccatca gcagatgaat 4380

gtgttaagca caaagcatct tccttaaagc acaaagagag ggactaactg atgctgcatc 4440

tagaaaacac ctttaagttg cctttcctct ttgtagttag cgttcaggca ggtgacgtgt 4500

ggaaagtcta gggggttcca ttctggccat gcgagcccag ctcctaccaa cgtcggtaac 4560

ttgagcagtc cctgttgctg gccagagact gcctggtcgc cagcgctcac catgggtgcc 4620

aggatgcttc gcagaggcac tgtgctcacg gttggacttg gtgtcagtgg gaaagggcag 4680

tgtggggact gtcatttttg tgatttaata acacacagtg aaaatccagg aagaatgaat 4740

taagcttctt ctgggagttg tttattcctg ctcgtgctta agattgatga tttcgtgaaa 4800

taaagaacat catttcattt aagagatcat ttcattaaga tctctaatct gttttgagtc 4860

tttacaaaat agccagttat aaaatggggc ttgatttgtt tagactgaag gaagacgttt 4920

tcccaaaata tactacagaa gtgctacaat atttgcgata ttaaaatgcc tgcagattga 4980

aaatgggggc cactcatttc agaactgcag gaatggtgta gttacagatc gacataaact 5040

cctgcccccc aacaatgcca tgagctgctt agcccaggag acctgggagc tatggcagga 5100

cggttaggcc agccgatgag ggactgcaga gaggctactg gaaggttaag gacccagaga 5160

gaaatcgaga ggtgccctac agcagccagg cctatcagga tccgtcacac acggcagcgg 5220

cgtggacacc ggcctgatgc agagcgtgac ccctcctgct gggacctgtg ttgtaagctc 5280

ctatttgctt atcttgttta tttcaagcag aaatcaataa attccataac cctctgtatt 5340

gactgcaatg taagctgctg aggagactgg ttctgttggt cagtcaggtg tttgctcagc 5400

cctgtctgat cacctgtgct gctctgtccc taactagtga cccatggaag cttccaagca 5460

gttttctctt catcactact aacaaacgaa acactaagaa ggcttagtat cgctcttttt 5520

ctgcggggct actctgaagt actgacttgc tttccagtct gattcacgtt agcagtgtgt 5580

acactactgt atcatcatca gcttcatcac cctgtaaacc aggctcctct gaagagactt 5640

tggtgagatg aacgtgaggt aaaaatttcg ttcggcaaaa aaaaaaaaaa aaaa 5694

<210> 14
<211> 786
<212> PRT
<213> Homo sapiens

<400> 14

Met Val Ile Met Ser Glu Phe Ser Ala Asp Pro Ala Gly Gln Gly Gln
1 5 10 15

Gly Gln Gln Lys Pro Leu Arg Val Gly Phe Tyr Asp Ile Glu Arg Thr
20 25 30

Leu Gly Lys Gly Asn Phe Ala Val Val Lys Leu Ala Arg His Arg Val
35 40 45

Thr Lys Thr Gln Val Ala Ile Lys Ile Ile Asp Lys Thr Arg Leu Asp
50 55 60

Ser Ser Asn Leu Glu Lys Ile Tyr Arg Glu Val Gln Leu Met Lys Leu
65 70 75 80

Leu Asn His Pro His Ile Ile Lys Leu Tyr Gln Val Met Glu Thr Lys
85 90 95

Asp Met Leu Tyr Ile Val Thr Glu Phe Ala Lys Asn Gly Glu Met Phe
100 105 110

Asp Tyr Leu Thr Ser Asn Gly His Leu Ser Glu Asn Glu Ala Arg Lys
115 120 125

Lys Phe Trp Gln Ile Leu Ser Ala Val Glu Tyr Cys His Asp His His
130 135 140

Ile Val His Arg Asp Leu Lys Thr Glu Asn Leu Leu Leu Asp Gly Asn
145 150 155 160

Met Asp Ile Lys Leu Ala Gly Thr Glu Asp Phe Gly Phe Gly Asn Phe
165 170 175

Tyr Lys Ser Gly Glu Pro Leu Ser Thr Trp Cys Gly Ser Pro Pro Tyr
180 185 190

Ala Ala Pro Glu Val Phe Glu Gly Lys Glu Tyr Glu Gly Pro Gln Leu
195 200 205

Asp Ile Trp Ser Leu Gly Val Val Leu Tyr Val Leu Val Cys Gly Ser

```
     210                 215                 220

Leu Pro Phe Asp Gly Pro Asn Leu Pro Thr Leu Arg Gln Arg Val Leu
225                 230                 235                 240

Glu Gly Arg Phe Arg Ile Pro Phe Phe Met Ser Gln Asp Cys Glu Ser
                245                 250                 255

Leu Ile Arg Arg Met Leu Val Val Asp Pro Ala Arg Arg Ile Thr Ile
            260                 265                 270

Ala Gln Ile Arg Gln His Arg Trp Met Arg Ala Glu Pro Cys Leu Pro
        275                 280                 285

Gly Pro Ala Cys Pro Ala Phe Ser Ala His Ser Tyr Thr Ser Asn Leu
    290                 295                 300

Gly Asp Tyr Asp Glu Gln Ala Leu Gly Ile Met Gln Thr Leu Gly Val
305                 310                 315                 320

Asp Arg Gln Arg Thr Val Glu Ser Leu Gln Asn Ser Ser Tyr Asn His
                325                 330                 335

Phe Ala Ala Ile Tyr Tyr Leu Leu Leu Glu Arg Leu Lys Glu Tyr Arg
            340                 345                 350

Asn Ala Gln Cys Ala Arg Pro Gly Pro Ala Arg Gln Pro Arg Pro Arg
        355                 360                 365

Ser Ser Asp Leu Ser Gly Leu Glu Val Pro Gln Glu Gly Leu Ser Thr
    370                 375                 380

Asp Pro Phe Arg Pro Ala Leu Leu Cys Pro Gln Pro Gln Thr Leu Val
385                 390                 395                 400

Gln Ser Val Leu Gln Ala Glu Met Asp Cys Glu Leu Gln Ser Ser Leu
                405                 410                 415

Gln Trp Pro Leu Phe Phe Pro Val Asp Ala Ser Cys Ser Gly Val Phe
            420                 425                 430

Arg Pro Arg Pro Val Ser Pro Ser Ser Leu Leu Asp Thr Ala Ile Ser
        435                 440                 445

Glu Glu Ala Arg Gln Gly Pro Gly Leu Glu Glu Glu Gln Asp Thr Gln
    450                 455                 460
```

```
Glu Ser Leu Pro Ser Ser Thr Gly Arg Arg His Thr Leu Ala Glu Val
465                 470                 475                 480

Ser Thr Arg Leu Ser Pro Leu Thr Ala Pro Cys Lys Phe Val Ser Pro
                485                 490                 495

Ser Thr Thr Ala Ser Pro Ala Glu Gly Thr Ser Ser Asp Ser Cys Leu
            500                 505                 510

Thr Phe Ser Ala Ser Lys Ser Pro Ala Gly Leu Ser Gly Thr Pro Ala
        515                 520                 525

Thr Gln Gly Leu Leu Gly Ala Cys Ser Pro Val Arg Leu Ala Ser Pro
    530                 535                 540

Phe Leu Gly Ser Gln Ser Ala Thr Pro Val Leu Gln Ala Gln Gly Gly
545                 550                 555                 560

Leu Gly Gly Ala Val Leu Leu Pro Val Ser Phe Gln Glu Gly Arg Arg
                565                 570                 575

Ala Ser Asp Thr Ser Leu Thr Gln Gly Leu Lys Ala Phe Arg Gln Gln
            580                 585                 590

Leu Arg Lys Thr Thr Arg Thr Lys Gly Phe Leu Gly Leu Asn Lys Ile
        595                 600                 605

Lys Gly Leu Ala Arg Gln Val Cys Gln Ala Pro Ala Ser Arg Ala Ser
    610                 615                 620

Arg Gly Gly Leu Ser Pro Phe His Ala Pro Ala Gln Ser Pro Gly Leu
625                 630                 635                 640

His Gly Gly Ala Ala Gly Ser Arg Glu Gly Trp Ser Leu Leu Glu Glu
                645                 650                 655

Val Leu Glu Gln Gln Arg Leu Leu Gln Leu Gln His His Pro Ala Ala
            660                 665                 670

Ala Pro Gly Cys Ser Gln Ala Pro Gln Pro Ala Pro Ala Pro Phe Val
        675                 680                 685

Ile Ala Pro Cys Asp Gly Pro Gly Ala Ala Pro Leu Pro Ser Thr Leu
    690                 695                 700

Leu Thr Ser Gly Leu Pro Leu Leu Pro Pro Pro Leu Leu Gln Thr Gly
```

705 710 715 720

Ala Ser Pro Val Ala Ser Ala Ala Gln Leu Leu Asp Thr His Leu His
725 730 735

Ile Gly Thr Gly Pro Thr Ala Leu Pro Ala Val Pro Pro Pro Arg Leu
740 745 750

Ala Arg Leu Ala Pro Gly Cys Glu Pro Leu Gly Leu Leu Gln Gly Asp
755 760 765

Cys Glu Met Glu Asp Leu Met Pro Cys Ser Leu Gly Thr Phe Val Leu
770 775 780

Val Gln
785

<210> 15
<211> 783
<212> PRT
<213> Homo sapiens

<400> 15

Met Val Ile Met Ser Glu Phe Ser Ala Asp Pro Ala Gly Gln Gly Gln
1 5 10 15

Gly Gln Gln Lys Pro Leu Arg Val Gly Phe Tyr Asp Ile Glu Arg Thr
20 25 30

Leu Gly Lys Gly Asn Phe Ala Val Val Lys Leu Ala Arg His Arg Val
35 40 45

Thr Lys Thr Gln Val Ala Ile Lys Ile Ile Asp Lys Thr Arg Leu Asp
50 55 60

Ser Ser Asn Leu Glu Lys Ile Tyr Arg Glu Val Gln Leu Met Lys Leu
65 70 75 80

Leu Asn His Pro His Ile Ile Lys Leu Tyr Gln Val Met Glu Thr Lys
85 90 95

Asp Met Leu Tyr Ile Val Thr Glu Phe Ala Lys Asn Gly Glu Met Phe
100 105 110

Asp Tyr Leu Thr Ser Asn Gly His Leu Ser Glu Asn Glu Ala Arg Lys
115 120 125

```
Lys Phe Trp Gln Ile Leu Ser Ala Val Glu Tyr Cys His Asp His His
    130                 135                 140

Ile Val His Arg Asp Leu Lys Thr Glu Asn Leu Leu Leu Asp Gly Asn
145                 150                 155                 160

Met Asp Ile Lys Leu Ala Asp Phe Gly Phe Gly Asn Phe Tyr Lys Ser
                165                 170                 175

Gly Glu Pro Leu Ser Thr Trp Cys Gly Ser Pro Pro Tyr Ala Ala Pro
            180                 185                 190

Glu Val Phe Glu Gly Lys Glu Tyr Glu Gly Pro Gln Leu Asp Ile Trp
        195                 200                 205

Ser Leu Gly Val Val Leu Tyr Val Leu Val Cys Gly Ser Leu Pro Phe
    210                 215                 220

Asp Gly Pro Asn Leu Pro Thr Leu Arg Gln Arg Val Leu Glu Gly Arg
225                 230                 235                 240

Phe Arg Ile Pro Phe Phe Met Ser Gln Asp Cys Glu Ser Leu Ile Arg
                245                 250                 255

Arg Met Leu Val Val Asp Pro Ala Arg Arg Ile Thr Ile Ala Gln Ile
            260                 265                 270

Arg Gln His Arg Trp Met Arg Ala Glu Pro Cys Leu Pro Gly Pro Ala
        275                 280                 285

Cys Pro Ala Phe Ser Ala His Ser Tyr Thr Ser Asn Leu Gly Asp Tyr
    290                 295                 300

Asp Glu Gln Ala Leu Gly Ile Met Gln Thr Leu Gly Val Asp Arg Gln
305                 310                 315                 320

Arg Thr Val Glu Ser Leu Gln Asn Ser Ser Tyr Asn His Phe Ala Ala
                325                 330                 335

Ile Tyr Tyr Leu Leu Leu Glu Arg Leu Lys Glu Tyr Arg Asn Ala Gln
            340                 345                 350

Cys Ala Arg Pro Gly Pro Ala Arg Gln Pro Arg Pro Arg Ser Ser Asp
        355                 360                 365

Leu Ser Gly Leu Glu Val Pro Gln Glu Gly Leu Ser Thr Asp Pro Phe
    370                 375                 380
```

```
Arg Pro Ala Leu Leu Cys Pro Gln Pro Gln Thr Leu Val Gln Ser Val
385                 390                 395                 400

Leu Gln Ala Glu Met Asp Cys Glu Leu Gln Ser Ser Leu Gln Trp Pro
                405                 410                 415

Leu Phe Phe Pro Val Asp Ala Ser Cys Ser Gly Val Phe Arg Pro Arg
            420                 425                 430

Pro Val Ser Pro Ser Ser Leu Leu Asp Thr Ala Ile Ser Glu Glu Ala
        435                 440                 445

Arg Gln Gly Pro Gly Leu Glu Glu Glu Gln Asp Thr Gln Glu Ser Leu
    450                 455                 460

Pro Ser Ser Thr Gly Arg Arg His Thr Leu Ala Glu Val Ser Thr Arg
465                 470                 475                 480

Leu Ser Pro Leu Thr Ala Pro Cys Ile Val Val Ser Pro Ser Thr Thr
                485                 490                 495

Ala Ser Pro Ala Glu Gly Thr Ser Ser Asp Ser Cys Leu Thr Phe Ser
            500                 505                 510

Ala Ser Lys Ser Pro Ala Gly Leu Ser Gly Thr Pro Ala Thr Gln Gly
        515                 520                 525

Leu Leu Gly Ala Cys Ser Pro Val Arg Leu Ala Ser Pro Phe Leu Gly
    530                 535                 540

Ser Gln Ser Ala Thr Pro Val Leu Gln Ala Gln Gly Gly Leu Gly Gly
545                 550                 555                 560

Ala Val Leu Leu Pro Val Ser Phe Gln Glu Gly Arg Arg Ala Ser Asp
                565                 570                 575

Thr Ser Leu Thr Gln Gly Leu Lys Ala Phe Arg Gln Gln Leu Arg Lys
            580                 585                 590

Thr Thr Arg Thr Lys Gly Phe Leu Gly Leu Asn Lys Ile Lys Gly Leu
        595                 600                 605

Ala Arg Gln Val Cys Gln Val Pro Ala Ser Arg Ala Ser Arg Gly Gly
    610                 615                 620
```

Leu Ser Pro Phe His Ala Pro Ala Gln Ser Pro Gly Leu His Gly Gly
625 630 635 640

Ala Ala Gly Ser Arg Glu Gly Trp Ser Leu Leu Glu Glu Val Leu Glu
645 650 655

Gln Gln Arg Leu Leu Gln Leu Gln His His Pro Ala Ala Ala Pro Gly
660 665 670

Cys Ser Gln Ala Pro Gln Pro Ala Pro Ala Pro Phe Val Ile Ala Pro
675 680 685

Cys Asp Gly Pro Gly Ala Ala Pro Leu Pro Ser Thr Leu Leu Thr Ser
690 695 700

Gly Leu Pro Leu Leu Pro Pro Pro Leu Leu Gln Thr Gly Ala Ser Pro
705 710 715 720

Val Ala Ser Ala Ala Gln Leu Leu Asp Thr His Leu His Ile Gly Thr
725 730 735

Gly Pro Thr Ala Leu Pro Ala Val Pro Pro Pro Arg Leu Ala Arg Leu
740 745 750

Ala Pro Gly Cys Glu Pro Leu Gly Leu Leu Gln Gly Asp Cys Glu Met
755 760 765

Glu Asp Leu Met Pro Cys Ser Leu Gly Thr Phe Val Leu Val Gln
770 775 780

<210> 16
<211> 1371
<212> PRT
<213> Homo sapiens

<400> 16

Ala Gln Gly Trp Gln Ala Val Gly Thr Gly Ala Arg Ala Ser Ala Val
1 5 10 15

Ala Ala Val Pro Ser Val Ser Leu Leu Ser Gly Ala Ser Ser Ser Ser
20 25 30

Leu Ala Trp Cys Gly Leu Ala Thr Gly Ala Leu Gly Ala Gly Ala Arg
35 40 45

Gly Ile Pro Glu Leu Arg Gly Ala Ala Gly Ala Gly Gly Ala Ala Gly
50 55 60

```
Ala Gly Thr Gly Gly Ala Gly Pro Ala Gly Arg Leu Leu Pro Pro Pro
65                  70                  75                  80

Ala Pro Gly Ser Pro Ala Ala Pro Ala Ala Val Ser Pro Ala Ala Gly
                85                  90                  95

Gln Pro Arg Pro Pro Ala Pro Ala Ser Arg Gly Pro Met Pro Ala Arg
            100                 105                 110

Ile Gly Tyr Tyr Glu Ile Asp Arg Thr Ile Gly Lys Gly Asn Phe Ala
        115                 120                 125

Val Val Lys Arg Ala Thr His Leu Val Thr Lys Ala Lys Val Ala Ile
    130                 135                 140

Lys Ile Ile Asp Lys Thr Gln Leu Asp Glu Glu Asn Leu Lys Lys Ile
145                 150                 155                 160

Phe Arg Glu Val Gln Ile Met Lys Met Leu Cys His Pro His Ile Ile
                165                 170                 175

Arg Leu Tyr Gln Val Met Glu Thr Glu Arg Met Ile Tyr Leu Val Thr
            180                 185                 190

Glu Tyr Ala Ser Gly Gly Glu Ile Phe Asp His Leu Val Ala His Gly
        195                 200                 205

Arg Met Ala Glu Lys Glu Ala Arg Arg Lys Phe Lys Gln Ile Val Thr
    210                 215                 220

Ala Val Tyr Phe Cys His Cys Arg Asn Ile Val His Arg Asp Leu Lys
225                 230                 235                 240

Ala Glu Asn Leu Leu Leu Asp Ala Asn Leu Asn Ile Lys Ile Ala Asp
                245                 250                 255

Phe Gly Phe Ser Asn Leu Phe Thr Pro Gly Gln Leu Leu Lys Thr Trp
            260                 265                 270

Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe Glu Gly Lys Glu
        275                 280                 285

Tyr Asp Gly Pro Lys Val Asp Ile Trp Ser Leu Gly Val Val Leu Tyr
    290                 295                 300

Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Ser Thr Leu Gln Asn
```

305 310 315 320

Leu Arg Ala Arg Val Leu Ser Gly Lys Phe Arg Ile Pro Phe Phe Met
325 330 335

Ser Thr Glu Cys Glu His Leu Ile Arg His Met Leu Val Leu Asp Pro
340 345 350

Asn Lys Arg Leu Ser Met Glu Gln Ile Cys Lys His Lys Trp Met Lys
355 360 365

Leu Gly Asp Ala Asp Pro Asn Phe Asp Arg Leu Ile Ala Glu Cys Gln
370 375 380

Gln Leu Lys Glu Glu Arg Gln Val Asp Pro Leu Asn Glu Asp Val Leu
385 390 395 400

Leu Ala Met Glu Asp Met Gly Leu Asp Lys Glu Gln Thr Leu Gln Ser
405 410 415

Leu Arg Ser Asp Ala Tyr Asp His Tyr Ser Ala Ile Tyr Ser Leu Leu
420 425 430

Cys Asp Arg His Lys Arg His Lys Thr Leu Arg Leu Gly Ala Leu Pro
435 440 445

Ser Met Pro Arg Ala Leu Ala Phe Gln Ala Pro Val Asn Ile Gln Ala
450 455 460

Glu Gln Ala Gly Thr Ala Met Asn Ile Ser Val Pro Gln Val Gln Leu
465 470 475 480

Ile Asn Pro Glu Asn Gln Ile Val Glu Pro Asp Gly Thr Leu Asn Leu
485 490 495

Asp Ser Asp Glu Gly Glu Glu Pro Ser Pro Glu Ala Leu Val Arg Tyr
500 505 510

Leu Ser Met Arg Arg His Thr Val Gly Val Ala Asp Pro Arg Thr Glu
515 520 525

Val Met Glu Asp Leu Gln Lys Leu Leu Pro Gly Phe Pro Gly Val Asn
530 535 540

Pro Gln Ala Pro Phe Leu Gln Val Ala Pro Asn Val Asn Phe Met His
545 550 555 560

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Asn Leu Leu Pro Met Gln Asn Leu Gln Pro Thr Gly Gln Leu Glu Tyr
                565                 570                 575

Lys Glu Gln Ser Leu Leu Gln Pro Pro Thr Leu Gln Leu Leu Asn Gly
            580                 585                 590

Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly Ala Asn Ile Gln
        595                 600                 605

Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly Pro Ser Pro Leu
    610                 615                 620

Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro Val Asp Glu Glu
625                 630                 635                 640

Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln Ser Ser Thr Tyr
                645                 650                 655

Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg Phe Ser Pro Val
            660                 665                 670

Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Gln Ala Phe Lys Ala His
        675                 680                 685

Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln Leu Gln Gln Glu
    690                 695                 700

Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile Asp Glu Arg Thr
705                 710                 715                 720

Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln Gln Glu Gln His
                725                 730                 735

His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile Cys Pro Pro Gln
            740                 745                 750

Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln Pro Ala Leu Leu
        755                 760                 765

Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser Ser Pro Pro Pro
    770                 775                 780

Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser Asn Ser Pro Pro
785                 790                 795                 800

Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala Ala Ser Ser Ser
```

805 810 815

Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe Gln Gln Gln Pro
820 825 830

Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr Cys Leu Gly Met
835 840 845

Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln Val Gln Glu Pro
850 855 860

Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala Gly Ser Ser Gly
865 870 875 880

Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met Gln Met Gln His
885 890 895

Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His Arg Pro Leu Ser
900 905 910

Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser Leu Asn Val Asn
915 920 925

Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu His Pro His Leu
930 935 940

Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr Ser Pro Ser Thr
945 950 955 960

Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val Pro Pro Leu Asp
965 970 975

Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln Pro Pro His Tyr
980 985 990

Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro Thr Pro Pro Asp
995 1000 1005

Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln Gly Leu Leu
1010 1015 1020

Ser Pro Arg His Ser Leu Thr Gly His Ser Asp Ile Arg Leu Pro
1025 1030 1035

Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln Gln Arg
1040 1045 1050

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Tyr Gln Glu Leu
1055 1060 1065

Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser
1070 1075 1080

Leu Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln
1085 1090 1095

Asn Ala Asp Ser Tyr His His His Thr Ser Pro Gln His Leu Leu
1100 1105 1110

Gln Ile Arg Ala Gln Glu Cys Val Ser Gln Ala Ser Ser Pro Thr
1115 1120 1125

Pro Pro His Gly Tyr Ala His Gln Pro Ala Leu Met His Ser Glu
1130 1135 1140

Ser Met Glu Glu Asp Cys Ser Cys Glu Gly Ala Lys Asp Gly Phe
1145 1150 1155

Gln Asp Ser Lys Ser Ser Ser Thr Leu Thr Lys Gly Cys His Asp
1160 1165 1170

Ser Pro Leu Leu Leu Ser Thr Gly Gly Pro Gly Asp Pro Glu Ser
1175 1180 1185

Leu Leu Gly Thr Val Ser His Ala Gln Glu Leu Gly Ile His Pro
1190 1195 1200

Tyr Gly His Gln Pro Thr Ala Ala Phe Ser Lys Asn Lys Val Pro
1205 1210 1215

Ser Arg Glu Pro Val Ile Gly Asn Cys Met Asp Arg Ser Ser Pro
1220 1225 1230

Gly Gln Ala Val Glu Leu Pro Asp His Asn Gly Leu Gly Tyr Pro
1235 1240 1245

Ala Arg Pro Ser Val His Glu His His Arg Pro Arg Ala Leu Gln
1250 1255 1260

Arg His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln Leu
1265 1270 1275

Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser

1280 1285 1290

Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met
1295 1300 1305

Gly Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala
1310 1315 1320

Ser Leu Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln
1325 1330 1335

His Leu Asn Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile
1340 1345 1350

Leu Leu Ser Tyr Lys His Pro Glu Val Ser Phe Ser Met Glu Gln
1355 1360 1365

Ala Gly Val
1370

<210> 17
<211> 926
<212> PRT
<213> Homo sapiens

<400> 17

Met Val Met Ala Asp Gly Pro Arg His Leu Gln Arg Gly Pro Val Arg
1 5 10 15

Val Gly Phe Tyr Asp Ile Glu Gly Thr Leu Gly Lys Gly Asn Phe Ala
20 25 30

Val Val Lys Leu Gly Arg His Arg Ile Thr Lys Thr Glu Val Ala Ile
35 40 45

Lys Ile Ile Asp Lys Ser Gln Leu Asp Ala Val Asn Leu Glu Lys Ile
50 55 60

Tyr Arg Glu Val Gln Ile Met Lys Met Leu Asp His Pro His Ile Ile
65 70 75 80

Lys Leu Tyr Gln Val Met Glu Thr Lys Ser Met Leu Tyr Leu Val Thr
85 90 95

Glu Tyr Ala Lys Asn Gly Glu Ile Phe Asp Tyr Leu Ala Asn His Gly
100 105 110

```
Arg Leu Asn Glu Ser Glu Ala Arg Arg Lys Phe Trp Gln Ile Leu Ser
        115                 120                 125

Ala Val Asp Tyr Cys His Gly Arg Lys Ile Val His Arg Asp Leu Lys
    130                 135                 140

Ala Glu Asn Leu Leu Leu Asp Asn Asn Met Asn Ile Lys Ile Ala Asp
145                 150                 155                 160

Phe Gly Phe Gly Asn Phe Phe Lys Ser Gly Glu Leu Leu Ala Thr Trp
                165                 170                 175

Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Val Phe Glu Gly Gln Gln
            180                 185                 190

Tyr Glu Gly Pro Gln Leu Asp Ile Trp Ser Met Gly Val Val Leu Tyr
        195                 200                 205

Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Pro Thr Leu Pro Ile
    210                 215                 220

Leu Arg Gln Arg Val Leu Glu Gly Arg Phe Arg Ile Pro Tyr Phe Met
225                 230                 235                 240

Ser Glu Asp Cys Glu His Leu Ile Arg Arg Met Leu Val Leu Asp Pro
                245                 250                 255

Ser Lys Arg Leu Thr Ile Ala Gln Ile Lys Glu His Lys Trp Met Leu
            260                 265                 270

Ile Glu Val Pro Val Gln Arg Pro Val Leu Tyr Pro Gln Glu Gln Glu
        275                 280                 285

Asn Glu Pro Ser Ile Gly Glu Phe Asn Glu Gln Val Leu Arg Leu Met
    290                 295                 300

His Ser Leu Gly Ile Asp Gln Gln Lys Thr Ile Glu Ser Leu Gln Asn
305                 310                 315                 320

Lys Ser Tyr Asn His Phe Ala Ala Ile Tyr Phe Leu Leu Val Glu Arg
                325                 330                 335

Leu Lys Ser His Arg Ser Ser Phe Pro Val Glu Gln Arg Leu Asp Gly
            340                 345                 350

Arg Gln Arg Arg Pro Ser Thr Ile Ala Glu Gln Thr Val Ala Lys Ala
        355                 360                 365
```

```
Gln Thr Val Gly Leu Pro Val Thr Met His Ser Pro Asn Met Arg Leu
    370                 375                 380

Leu Arg Ser Ala Leu Leu Pro Gln Ala Ser Asn Val Glu Ala Phe Ser
385                 390                 395                 400

Phe Pro Ala Ser Gly Cys Gln Ala Glu Ala Ala Phe Met Glu Glu Glu
                405                 410                 415

Cys Val Asp Thr Pro Lys Val Asn Gly Cys Leu Leu Asp Pro Val Pro
            420                 425                 430

Pro Val Leu Val Arg Lys Gly Cys Gln Ser Leu Pro Ser Asn Met Met
        435                 440                 445

Glu Thr Ser Ile Asp Glu Gly Leu Glu Thr Glu Gly Glu Ala Glu Glu
    450                 455                 460

Asp Pro Ala His Ala Phe Glu Ala Phe Gln Ser Thr Arg Ser Gly Gln
465                 470                 475                 480

Arg Arg His Thr Leu Ser Glu Val Thr Asn Gln Leu Val Val Met Pro
                485                 490                 495

Gly Ala Gly Lys Ile Phe Ser Met Asn Asp Ser Pro Ser Leu Asp Ser
            500                 505                 510

Val Asp Ser Glu Tyr Asp Met Gly Ser Val Gln Arg Asp Leu Asn Phe
        515                 520                 525

Leu Glu Asp Asn Pro Ser Leu Lys Asp Ile Met Leu Ala Asn Gln Pro
    530                 535                 540

Ser Pro Arg Met Thr Ser Pro Phe Ile Ser Leu Arg Pro Thr Asn Pro
545                 550                 555                 560

Ala Met Gln Ala Leu Ser Ser Gln Lys Arg Glu Val His Asn Arg Ser
                565                 570                 575

Pro Val Ser Phe Arg Glu Gly Arg Arg Ala Ser Asp Thr Ser Leu Thr
            580                 585                 590

Gln Gly Ile Val Ala Phe Arg Gln His Leu Gln Asn Leu Ala Arg Thr
        595                 600                 605
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Lys Gly Ile Leu Glu Leu Asn Lys Val Gln Leu Leu Tyr Glu Gln Ile
    610                 615                 620

Gly Pro Glu Ala Asp Pro Asn Leu Ala Pro Ala Ala Pro Gln Leu Gln
625                 630                 635                 640

Asp Leu Ala Ser Ser Cys Pro Gln Glu Glu Val Ser Gln Gln Gln Glu
                645                 650                 655

Ser Val Ser Thr Leu Pro Ala Ser Val His Pro Gln Leu Ser Pro Arg
            660                 665                 670

Gln Ser Leu Glu Thr Gln Tyr Leu Gln His Arg Leu Gln Lys Pro Ser
        675                 680                 685

Leu Leu Ser Lys Ala Gln Asn Thr Cys Gln Leu Tyr Cys Lys Glu Pro
    690                 695                 700

Pro Arg Ser Leu Glu Gln Gln Leu Gln Glu His Arg Leu Gln Gln Lys
705                 710                 715                 720

Arg Leu Phe Leu Gln Lys Gln Ser Gln Leu Gln Ala Tyr Phe Asn Gln
                725                 730                 735

Met Gln Ile Ala Glu Ser Ser Tyr Pro Gln Pro Ser Gln Gln Leu Pro
            740                 745                 750

Leu Pro Arg Gln Glu Thr Pro Pro Pro Ser Gln Gln Ala Pro Pro Phe
        755                 760                 765

Ser Leu Thr Gln Pro Leu Ser Pro Val Leu Glu Pro Ser Ser Glu Gln
    770                 775                 780

Met Gln Tyr Ser Pro Phe Leu Ser Gln Tyr Gln Glu Met Gln Leu Gln
785                 790                 795                 800

Pro Leu Pro Ser Thr Ser Gly Pro Arg Ala Ala Pro Pro Leu Pro Thr
                805                 810                 815

Gln Leu Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
            820                 825                 830

Arg Gln Pro Gly Ala Ala Pro Ala Pro Leu Gln Phe Ser Tyr Gln Thr
        835                 840                 845

Cys Glu Leu Pro Ser Ala Ala Ser Pro Ala Pro Asp Tyr Pro Thr Pro
    850                 855                 860
```

```
Cys Gln Tyr Pro Val Asp Gly Ala Gln Gln Ser Asp Leu Thr Gly Pro
865                 870                 875                 880

Asp Cys Pro Arg Ser Pro Gly Leu Gln Glu Ala Pro Ser Ser Tyr Asp
                885                 890                 895

Pro Leu Ala Leu Ser Glu Leu Pro Gly Leu Phe Asp Cys Glu Met Leu
            900                 905                 910

Asp Ala Val Asp Pro Gln His Asn Gly Tyr Val Leu Val Asn
        915                 920                 925

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<211>  926
<212>  PRT
<213>  Homo sapiens

<400>  18

Met Val Met Ala Asp Gly Pro Arg His Leu Gln Arg Gly Pro Val Arg
1               5                   10                  15

Val Gly Phe Tyr Asp Ile Glu Gly Thr Leu Gly Lys Gly Asn Phe Ala
            20                  25                  30

Val Val Lys Leu Gly Arg His Arg Ile Thr Lys Thr Glu Val Ala Ile
        35                  40                  45

Lys Ile Ile Asp Lys Ser Gln Leu Asp Ala Val Asn Leu Glu Lys Ile
    50                  55                  60

Tyr Arg Glu Val Gln Ile Met Lys Met Leu Asp His Pro His Ile Ile
65                  70                  75                  80

Lys Leu Tyr Gln Val Met Glu Thr Lys Ser Met Leu Tyr Leu Val Thr
                85                  90                  95

Glu Tyr Ala Lys Asn Gly Glu Ile Phe Asp Tyr Leu Ala Asn His Gly
            100                 105                 110

Arg Leu Asn Glu Ser Glu Ala Arg Arg Lys Phe Trp Gln Ile Leu Ser
        115                 120                 125

Ala Val Asp Tyr Cys His Gly Arg Lys Ile Val His Arg Asp Leu Lys
    130                 135                 140

Ala Glu Asn Leu Leu Leu Asp Asn Asn Met Asn Ile Lys Ile Ala Asp
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145 150 155 160

Phe Gly Phe Gly Asn Phe Phe Lys Ser Gly Glu Leu Leu Ala Thr Trp
165 170 175

Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Val Phe Glu Gly Gln Gln
180 185 190

Tyr Glu Gly Pro Gln Leu Asp Ile Trp Ser Met Gly Val Val Leu Tyr
195 200 205

Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Pro Thr Leu Pro Ile
210 215 220

Leu Arg Gln Arg Val Leu Glu Gly Arg Phe Arg Ile Pro Tyr Phe Met
225 230 235 240

Ser Glu Asp Cys Glu His Leu Ile Arg Arg Met Leu Val Leu Asp Pro
245 250 255

Ser Lys Arg Leu Thr Ile Ala Gln Ile Lys Glu His Lys Trp Met Leu
260 265 270

Ile Glu Val Pro Val Gln Arg Pro Val Leu Tyr Pro Gln Glu Gln Glu
275 280 285

Asn Glu Pro Ser Ile Gly Glu Phe Asn Glu Gln Val Leu Arg Leu Met
290 295 300

His Ser Leu Gly Ile Asp Gln Gln Lys Thr Ile Glu Ser Leu Gln Asn
305 310 315 320

Lys Ser Tyr Asn His Phe Ala Ala Ile Tyr Phe Leu Leu Val Glu Arg
325 330 335

Leu Lys Ser His Arg Ser Ser Phe Pro Val Glu Gln Arg Leu Asp Gly
340 345 350

Arg Gln Arg Arg Pro Ser Thr Ile Ala Glu Gln Thr Val Ala Lys Ala
355 360 365

Gln Thr Val Gly Leu Pro Val Thr Met His Ser Pro Asn Met Arg Leu
370 375 380

Leu Arg Ser Ala Leu Leu Pro Gln Ala Ser Asn Val Glu Ala Phe Ser
385 390 395 400

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Phe Pro Ala Ser Gly Cys Gln Ala Glu Ala Ala Phe Met Glu Glu Glu
                405                 410                 415

Cys Val Asp Thr Pro Lys Val Asn Gly Cys Leu Leu Asp Pro Val Pro
            420                 425                 430

Pro Val Leu Val Arg Lys Gly Cys Gln Ser Leu Pro Ser Asn Met Met
        435                 440                 445

Glu Thr Ser Ile Asp Glu Gly Leu Glu Thr Glu Gly Glu Ala Glu Glu
    450                 455                 460

Asp Pro Ala His Ala Phe Glu Ala Phe Gln Ser Thr Arg Ser Gly Gln
465                 470                 475                 480

Arg Arg His Thr Leu Ser Glu Val Thr Asn Gln Leu Val Val Met Pro
                485                 490                 495

Gly Ala Gly Lys Ile Phe Ser Met Asn Asp Ser Pro Ser Leu Asp Ser
            500                 505                 510

Val Asp Ser Glu Tyr Asp Met Gly Ser Val Gln Arg Asp Leu Asn Phe
        515                 520                 525

Leu Glu Asp Asn Pro Ser Leu Lys Asp Ile Met Leu Ala Asn Gln Pro
    530                 535                 540

Ser Pro Arg Met Thr Ser Pro Phe Ile Ser Leu Arg Pro Thr Asn Pro
545                 550                 555                 560

Ala Met Gln Ala Leu Ser Ser Gln Lys Arg Glu Val His Asn Arg Ser
                565                 570                 575

Pro Val Ser Phe Arg Glu Gly Arg Arg Ala Ser Asp Thr Ser Leu Thr
            580                 585                 590

Gln Gly Ile Val Ala Phe Arg Gln His Leu Gln Asn Leu Ala Arg Thr
        595                 600                 605

Lys Gly Ile Leu Glu Leu Asn Lys Val Gln Leu Leu Tyr Glu Gln Ile
    610                 615                 620

Gly Pro Glu Ala Asp Pro Asn Leu Ala Pro Ala Ala Pro Gln Leu Gln
625                 630                 635                 640

Asp Leu Ala Ser Ser Cys Pro Gln Glu Glu Val Ser Gln Gln Gln Glu
```

```
                645                 650                 655

Ser Val Ser Thr Leu Pro Ala Ser Val His Pro Gln Leu Ser Pro Arg
            660                 665                 670

Gln Ser Leu Glu Thr Gln Tyr Leu Gln His Arg Leu Gln Lys Pro Ser
        675                 680                 685

Leu Leu Ser Lys Ala Gln Asn Thr Cys Gln Leu Tyr Cys Lys Glu Pro
    690                 695                 700

Pro Arg Ser Leu Glu Gln Gln Leu Gln Glu His Arg Leu Gln Gln Lys
705                 710                 715                 720

Arg Leu Phe Leu Gln Lys Gln Ser Gln Leu Gln Ala Tyr Phe Asn Gln
                725                 730                 735

Met Gln Ile Ala Glu Ser Ser Tyr Pro Gln Pro Ser Gln Gln Leu Pro
            740                 745                 750

Leu Pro Arg Gln Glu Thr Pro Pro Pro Ser Gln Gln Ala Pro Pro Phe
        755                 760                 765

Ser Leu Thr Gln Pro Leu Ser Pro Val Leu Glu Pro Ser Ser Glu Gln
    770                 775                 780

Met Gln Tyr Ser Pro Phe Leu Ser Gln Tyr Gln Glu Met Gln Leu Gln
785                 790                 795                 800

Pro Leu Pro Ser Thr Ser Gly Pro Arg Ala Ala Pro Pro Leu Pro Thr
                805                 810                 815

Gln Leu Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
            820                 825                 830

Arg Gln Pro Gly Ala Ala Pro Ala Pro Leu Gln Phe Ser Tyr Gln Thr
        835                 840                 845

Cys Glu Leu Pro Ser Ala Ala Ser Pro Ala Pro Asp Tyr Pro Thr Pro
    850                 855                 860

Cys Gln Tyr Pro Val Asp Gly Ala Gln Gln Ser Asp Leu Thr Gly Pro
865                 870                 875                 880

Asp Cys Pro Arg Ser Pro Gly Leu Gln Glu Ala Pro Ser Ser Tyr Asp
                885                 890                 895
```

Pro Leu Ala Leu Ser Glu Leu Pro Gly Leu Phe Asp Cys Glu Met Leu
900 905 910

Asp Ala Val Asp Pro Gln His Asn Gly Tyr Val Leu Val Asn
915 920 925